

Issues/Actionable Items from Peer Review+Backlook

Principle 1 - Line Management Responsibility for Safety:

Line management is directly responsible for the protection of the public, the workers, and the environment.

There are indications that line management, including the PIs, generally understand their responsibilities for the safety of their employees and operations; however, there appears to be weaknesses in execution of their responsibility. A latent safety management issue appears to underlie effective line management implementation of workplace safety. Workplace safety requires proactive involvement by line managers. They are responsible for communicating and demonstrating by example the principles and five core functions of ISM work activities and facility operations (1.1.6, 1.1.7). Specific weaknesses that support this interpretation were noted in the ISM Peer Review and the “backlook” review that followed.

A basic weakness noted is the finding that confusion exists throughout the Laboratory with respect to the title of “line manager.” The term line manager is not well defined. Line management position descriptions are not consistent across the Laboratory. Also, the understanding of line management expectations is not clear (1.1.14). Periodic walk-arounds are an essential part of line manager’s responsibilities in implementing safety. Senior management walk-arounds are spotty and vary from once a year to twice a day. The institutional expectation is that senior managers inspect all of their work spaces annually, which is insufficient oversight for many work activities. Discussions with the workforce confirm that the presence of senior management in the workplace has a positive impact, reinforcing the premise that management is interested in them and their safety (1.1.8). Less than adequate line management training contributes to this problem. The Peer Review report notes that Principal Investigators do not appear to be well trained and prepared for their line management responsibilities (1.1.1). It is not clear that all line managers are trained to conduct meaningful safety walk-arounds (3.1.1). Another contributing factor to this overall weakness is the lack of adequate communication from senior management to first line supervisors. There is evidence that the senior management support of middle and first line supervisors for doing work safely is not consistent. In many groups support is less than adequate (1.1.2). Common comments from the staff were: safety management is not a high priority for many PIs (1.1.5), and formal communications, designed to make ISM real for workers and researchers, are less than adequate (1.1.10). Furthermore, management’s communication of safety related issues to the rank and file is not effective (1.1.9). One reason for this perception may be that practicing the 5 Core Functions of ISM at the activity level is inconsistent and less than adequate (1.1.7).

The practice of principal investigators having 20-60 post docs and graduate students on a project is seen as a major contributing factor to weakness in the implementation of safety at the activity level. This issue was noted in the Peer Review as: the span of control for a principal investigator can exceed what is easily manageable making it even more difficult to monitor their spaces and activities (1.1.3) and by the “backlook” team as: span of control (excessive) does not allow responsible safety management (1.1.4).

Another major contributing factor is the relationship between principal investigator and post docs and graduate students. Post docs and graduate students are dependent on the recommendations from their PI’s for future career opportunities. This relationship deters identification of safety issues and implementation of work place safety (1.1.12).

Inadequate safety performance expectations were noted as a major contributing factor to an overall weakness in line management implementation and oversight of work place safety. Based upon a random sampling of performance review documents (PRDs), the majority of comments regarding ES&H performance was perfunctory and contained few qualitative measures (1.1.11). This was contrasted to the rigorous and detailed comments on technical and scientific performance. The “backlook” amplified this observation noting that not all PIs are equal with respect to responsibility for and performance of safety management (1.1.13).

Principle 2 - Clear Roles and Responsibilities:

Clear and unambiguous lines of authority and responsibility for ensuring safety shall be established and maintained at all organizational levels within the department and its contractors.

It is not clear how senior management is assured of an independent review of ES&H programs and work activities within divisions (8.2). ES&H assurance mechanisms are ineffective. Documentation provided by division ISM plans and division self-assessment plans reflect an uneven consideration of safety from one division to another (2.1.3). The existing feedback for improvement systems (Integrated Functional Appraisals, Self-Assessments, Management of ES&H reviews) are less than adequate in providing assurance of ES&H performance (2.1.4). Work observations and inspections are sometimes perceived as punitive and therefore actively resisted (2.1.1).

EH&S oversight is too decentralized and ineffective (2.1.12). The roles and responsibilities of EH&S staff with respect to other divisions is less than adequate. These need to be clarified in order to address the potential conflict of interest for EH&S staff as they provide support to the divisions and discharge their stewardship responsibilities. The overall model for how EH&S interacts with divisions needs to be clarified including EHS’ role in planning new or renovating existing facilities (2.1.5). Supervision of matrixed EH&S staff is less than adequate.

The definition of a line manager is not clearly understood nor consistent across the Laboratory (2.1.10). As a result, the roles and responsibilities of line managers and the Safety Coordinators varies across the Laboratory (2.1.7, 2.1.8, 2.1.11). Effectiveness of line managers in implementation of workplace safety can either be enhanced or adversely impacted by the traditional relationship between PI's and their post docs and graduate students (2.1.2).

Expectations to use and follow ES&H procedures are less than adequate (2.1.10). This is evident in the lack of clarity in roles and responsibilities in work authorizations (2.1.9) and the less than adequate change control mechanisms in place for such activities (2.1.10).

Some workers may view statements like "Each employee is responsible for his or her own safety" and "Unsafe behavior is antisocial behavior" as a way to assign blame to the worker in the event of an accident. This is not an idle concern. In our own institutions and in the news we have all observed blame and punishment put on workers involved in accidents that "were waiting to happen" because of working conditions or de facto accepted work practices. Some LBNL workers expressed feeling trapped by this responsibility because they have no effective way to change unsafe working conditions or practices.

Principle 3 – Competence Commensurate with Responsibilities:

Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge thhir responsibilities.

There is not a uniform, laboratory-wide way to educate leaders, managers, and supervisors on how to make safety an integrated part of the activities in the workplace. For example, it is not clear that all line managers are trained to conduct meaningful safety walk-arounds (3.1.1).

The role of safety coordinator varies across LBNL (3.1.2). The minimum qualifications and training of safety coordinators is not determined and formalized. There are only two required courses for safety coordinators and no other qualifications have been formalized.

Safety coordinators were established to support line management and facilitate involvement of ES&H subject matter experts. Some safety coordinators are the primary implementers of the LBNL safety program and some evidence indicates that the quality of the safety program is directly related to the quality of the safety coordinator. However this practice is contrary to the ISM principle that line management is responsible for safety. In addition, some coordinators act as "gatekeepers" to involvement of ES&H subject matter experts (3.1.3).

Causal analysis is inconsistently applied and may not result in corrective actions that will prevent recurrence. LBNL only performs in-depth causal analysis by

trained investigators for serious incidents (3.3.1). Only a handful of Lab staff have formal root cause analysis training. While safety coordinators and EHS liaisons are most likely to perform causal analysis investigations, the majority of this staff lacks any formal root cause analysis training (3.3.4). The formal root cause analysis report for the building 58 electrical incident is not comprehensive and difficult for Lab staff to readily use (5.3.1).

Trending exercises of incident root causes do not result in development of corrective actions that can be applied across the institution (3.3.2). Formal extent of condition analysis of incident root causes is not performed. Although the Lab requires that all corrective actions that are not immediately implemented must be tracked in CATS, tracking and closure of corrective actions from minor incidents is uneven across divisions (3.3.3).

Principle 4 - Balanced Priorities:

Resources shall be effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed.

Even though there is a very proactive approach in many elements of LBNL, the wide spread perception is that the Laboratory is in a very reactive posture with respect to ES&H. Significant portions of the staff believe that improvements do not occur unless there is a serious problem. Interviews with supervisory and non-supervisory employees disclosed their concern that “someone had to get hurt” before a safety problem would get fixed (4.1.1). When safety issues are identified, there has been less than adequate management support of staff because middle and first line managers and supervisors need to be better supported (4.1.2, 4.1.3). Employees see safety as a lower priority to “production” because of cuts in safety staff and safety issues that remain unfixed (4.1.6).

There are insufficient resources for safety. EH&S employees described their inability to provide adequate coverage because of lack of staff. The professional safety staff currently has no time to participate with the scientific staff in the planning of new experiments or facilities. Safety and the minimization of hazardous waste generation is thus reduced to an after thought rather than designed in from the beginning (4.1.5, 4.1.9, 4.1.10).

Risk taking is recognized, tolerated, and encouraged by workers, supervisors, co-workers, guests, and students. People will take safety risks to get the job done in order to retain project funding. This situation is aggravated during RIFs and growth periods (4.1.7, 4.1.8, 4.1.11).

The excessive focus on the DART and TRC rates has negatively impacted the safety program. The employees fear that any reported accident will have serious implications for LBNL, their division, their laboratory and possibly their job. The

loss of this accident information has negatively impacted the Laboratory's safety leading indicator program and thus the ability to implement programs specific to correcting deficiencies in the current program. The need for upper management review of all injuries produces an underground mentality because of the concern employees have with the use of the information. This would not be a problem if employees trusted the management to use the information to truly improve safety (4.2.1, 4.2.2).

Principle 5 – Identification of Safety Standards and Requirements:

Before work is performed, the associated hazards shall be evaluated and an agreed upon set of safety standards and requirements shall be established which, if properly implemented, will provide adequate assurance that the public, the workers, and the environment are protected from adverse conditions.

And

4. Principle 7 – Operations Authorization:

The conditions and requirements to be satisfied for operations to be initiated and conducted shall be clearly established and agreed upon.

The Lab-wide work control program (the 5 core functions) is less than adequate. It does not consistently cover low to high hazard activities. ES&H considerations, specifically hazard analysis and control, are not well integrated in planning work. (7.1.2). It should apply to both routine maintenance and experimental activities (7.1.1). The work authorization process is not well suited to project/maintenance type work (5.3). The present work control process is initiated only after ES&H issues have been identified (7.1.3). LBNL does not have a uniform work control program. It is not applied equally across all divisions and contracted work (7.1.4, 7.1.1). Although the work control program for significant hazards is controlled through formal authorizations, the process for lower level hazards is largely undefined. As a result, divisions employ a variety of line management authorizations to varying degrees of effectiveness.

For example, it is not clear that activity hazards that are below the threshold or not the primary subject for Activity Hazard Documents (AHDs) are adequately analyzed and controlled. The current work control process may not analyze hazards in a sufficiently broad scope. Formal work authorizations focus exclusively on the primary/ most significant hazards and do not consider other hazards that are part of the work process (5.1.1). Requirements for maintaining lists of authorized staff are unclear (7.2.1).

Principle 6 – Hazard Controls Tailored to Work Being Performed:

Administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and associated hazards.

Facility inspection program is variable in frequency and effectiveness and is not identifying and correcting hazards in a timely fashion. Requirements for inspecting workspaces are not uniform across the Lab. Rather, they are determined by each division, expressed in their division ISM Plans, and implemented through their division self-assessment programs. Many of these inspections do not include PIs, line managers, and appropriate subject matter experts (6.3.3). Most division ISM plans do not specify that this staff participate in workspace inspections. The only institutional inspection requirement, in the division self-assessment performance measures, requires that all workspaces are inspected once per year (6.3.2). Effectiveness of facility inspections varies greatly. The Lab Director's facility walkthrough resulted in the shutdown one PI's laboratories. The Director identified poor housekeeping, outdated safety contact lists, water leaks, and other safety concerns and hazards (6.3.1).

Other – A few of the Issues identified did not lend themselves to inclusion in the principles list but are captured here.

There are no ES&H performance measures or performance metrics that can be considered "leading indicators" for each division. Performance metrics tied to safety processes help define ES&H expectations and can lead to better overall ES&H performance.

The self-assessment process may not be serving the intended purpose. Division SA content/formality varies widely (8.2.1). The roll-up may not be telling management what they need to know. Evaluation criteria need more senior management attention and a strategic purpose (8.2.2). The SA evaluation criteria development process is not aligned with LBNL strategic objectives (8.2.3). Integrated Functional Appraisals (IFA) by SMEs and Management of ES&H (MESH) are vertical reviews; there is no process to focus independently on a program across the Laboratory.

Individuals at BSO believe that the Laboratory only shares information it has to and does not trust the DOE (site office, HQ, etc.). The BSO notes very late notifications (8.3.1). LBNL does not give BSO the information it needs to support the Lab (8.3.2). This reinforces the feeling of distrust (8.3.3).

